

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 87-127  
NPDES NO. CA0028070

REISSUING WASTE DISCHARGE REQUIREMENTS FOR

CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT, INDUSTRIAL WASTE TREATMENT PLANT  
NORTH BAYSIDE SYSTEM UNIT  
SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. City and County of San Francisco, San Francisco International Airport, Industrial Waste Treatment Plant submitted a report of waste discharge dated November 7, 1985 for reissuance of NPDES Permit No. CA0028070.
2. San Francisco International Airport is a member of the North Bayside System Unit (NBSU) which is the joint powers authority responsible for operation of certain shared transport, treatment, and disposal facilities. The NBSU includes Millbrae, Burlingame, South San Francisco, San Bruno, San Francisco International Airport (both industrial and domestic waste treatment plants), and Calgon Corporation. The treated wastewater is discharged from the NBSU force main and outfall into lower San Francisco Bay, a water of the State and the United States, northeast of Point San Bruno through a submerged diffuser about 5300 feet offshore at a depth of 20 feet below mean lower low water (37 deg 39 min 55 sec N latitude and 122 deg 21 min 41 sec W longitude). The City and County of San Francisco, San Francisco International Airport, Industrial Waste Treatment Plant and the North Bayside System Unit are hereinafter referred to collectively as the discharger.
3. The discharger presently discharges an average dry weather flow of 0.9 million gallons per day (mgd) from its secondary treatment plant which has a dry weather design capacity of 1.2 mgd and a wet weather design capacity of 1.7 mgd. Treatment consists of flow equalization, coagulation/floculation, dissolved air flotation, trickling filter, clarification and chlorination. The final effluent is dechlorinated at the NBSU joint facilities prior to discharge. The sludge is dewatered on the drying beds prior to its disposal at a permitted landfill site. When flow exceeds 1.7 mgd, storm water will be diverted to two storage basins for postponed treatment. During severe storms, when the capacity of treatment and storage are exceeded, excess storm water runoff will be discharged without treatment near shore. The industrial waste collection system is separate from the storm water collection system so that industrial waste will be treated and discharged to deep water at all times. Proposed discharges are shown on the attached map and described below:
  - a. Waste No. 001 consists of industrial wastewater from aircraft service, maintenance, and washing; ground vehicle service and maintenance and

rental car service, and surface runoff from aircraft washing areas and polluted portions of aircraft ramps and maintenance areas. During wet weather, Waste No. 001 includes storm water runoff up to the combined peak wet weather flow of 1.7 mgd. This waste is discharged through the NBSU deep water outfall.

b. **Waste No. 002** consists of combined effluent from the NBSU which includes treated wastewater from Millbrae, Burlingame, South San Francisco, San Bruno, Calgon Corporation and San Francisco International Airport (both industrial and domestic waste treatment plants).

c. **Waste No. 003** consists of Bay water infiltration and storm water runoff in excess of storage capacity of 0.84 million gallons in the south first flush pond. The runoff is from the area of the Airport south of Taxiway S, including the United Airlines cargo and service facilities, the south side of the passenger terminal and the TWA and Pan Am service areas. Discharge occurs from Pump Station No. 1 into San Francisco Bay.

d. **Waste No. 004** consists of Bay water infiltration and storm water runoff in excess of storage capacity of 3.1 million gallons in the north first flush pond. The runoff is from the area of the Airport north of Taxiway S, including the United Airlines maintenance base and the vehicle parking areas on the northwest side of the passenger terminal. Discharge occurs from Pump Station No. 2 into Seaplane Harbor.

e. **Waste No. 005** consists of relatively unpolluted storm water runoff from the area south of Airport Runway 28L near the intersection of Taxiways F and N. The contributing area is approximately 4800' x 1400'. Discharge occurs from Pump Station No. 1A into San Francisco Bay.

f. **Waste No. 006** consists of relatively unpolluted storm water runoff from the area north of Airport Runway 28R near the intersection of Taxiways C and N. The contributing area is approximately 4800' x 1000'. Discharge occurs from Pump Station No. 1B into San Francisco Bay.

g. **Waste No. 007** consists of relatively unpolluted storm water runoff from the northwest corner of Airport Runway 19R just off of Taxiway E. The contributing area is approximately 2100' x 2800'. Discharge occurs from Pump Station No. 1C into San Francisco Bay.

4. The industrial waste treatment plant's function is to treat the wastewater generated by the tenants on the property of the Airport. A user survey conducted by the discharger showed that United Airlines (UAL) contributes 75% of the total wastewater flow to the plant. The activities at the UAL's Maintenance and Operations Center include aircraft washing, parts cleaning, paint stripping, electroplating, laundry and cells testing. The wastewater generated contains heavy metals, solvents, detergents etc.. The wastes are segregated and pretreated prior to discharge into the industrial waste collection system.
5. The discharger must control its tenants to protect the operation and maintenance personnel, the collection system, to prevent interference and pass-through at the industrial waste treatment plant, and consequently to protect the beneficial uses of the receiving water.

6. The Charter of the City and County of San Francisco has empowered the discharger to prescribe rules and regulations for the administration of San Francisco International airport.
7. The discharger through a lease and permit system, requires the contributors to install necessary pretreatment facilities to comply with the rules and regulations and local discharge requirements in a Tenant Improvement Guide adopted by the discharger. UAL submits monthly self-monitoring reports to the discharger to document compliance with the local discharge requirements.
8. Heavy metals have been detected in the discharge from Waste Nos. 003 and 004. The discharger has investigated and inspected the tenant facilities located in the drainage area. However, the sources of contamination are still unknown but are probably from direct industrial discharges and/or non-point source contaminants. Stopping infiltration and dry weather discharge from Pump Stations Nos. 003 and 004, a source control program to identify the contributors and a management plan for best operation of the first flush ponds are needed to minimize the discharge of pollutants to the Airport's drainage system and to San Francisco Bay.
9. The discharger proposes to correct the infiltration problem in both Waste Nos. 003 and 004; to increase the intensity of the source control program; to develop operational procedures and evaluate the capacity of the first flush ponds in a best management plan. This should result in elimination of dry weather discharge and contaminated wet weather discharge from the two drainage stations.
10. The discharge is presently governed by Orders Nos. 84-13, 81-18, 77-25, 75-76, and Resolutions Nos. 692 and 499 which were adopted on March 21, 1984, April 15, 1981, March 15, 1977, November 18, 1975, August 19, 1965 and September 19, 1963, respectively.
11. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and the State Water Resources Control Board approved it on May 21, 1987. The Basin Plan contains water quality objectives for lower San Francisco Bay and contiguous waters.
12. The beneficial uses of lower San Francisco Bay are:
  - a. Water and non-water contact recreation
  - b. Fish migration and spawning
  - c. Wildlife habitat
  - d. Industrial water supply
  - e. Preservation of rare and endangered species
  - f. Navigation
  - g. Shellfish harvesting
  - h. Estuarine habitat
  - i. Commercial and sport fishing
13. The Basin Plan prohibits any wastewater discharge, which has particular characteristics of concern to beneficial uses, at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1. Exception to the above discharge prohibition will be considered for

discharges where an inordinate burden would be placed on the discharger relative to beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability.

14. The discharger reports and the Board concurs that the cost of containing or providing deep water discharge of all waste would be an inordinate burden relative to the beneficial uses protected. An equivalent level of environmental protection will be achieved by treating up to 1.7 mgd of industrial waste and storm water, storing 3.94 million gallons of the first storm water runoff for postponed treatment, and then discharging only the excess storm water runoff to near shore.
15. The Board finds that a 10:1 initial dilution of waste is not provided at the points of near shore discharge. However, the discharge of these wastes, under the requirements of this order, complies with the qualification in Finding No. 13 for permitting an exception to the prohibition against discharge without 10:1 initial dilution and the Board allows the near shore discharge of excess storm water in Waste Nos. 003, 004, 005, 006 and 007.
16. Effluent limitations and toxic effluent standards established pursuant to Section 301, 304 and 307 of the Clean Water Act and amendments thereto are applicable to the discharge.
17. Effluent limitation guidelines requiring the application of best available technology economically achievable (BAT) for the Airport discharge have not been promulgated by the U. S. Environmental Protection Agency. Effluent limitations of this Order are based on the Basin Plan, State plans and policies, current plant performance, and best engineering judgment. The limitations are considered to be those attainable by BAT, in the judgment of the Board.
18. An Operations and Maintenance Manual is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.
19. This Order serves as an NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
20. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.
21. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT CITY AND COUNTY OF SAN FRANCISCO, SAN FRANCISCO INTERNATIONAL AIRPORT, INDUSTRIAL WASTE TREATMENT PLANT AND NORTH BAYSIDE SYSTEM UNIT in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. The discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited. Exceptions shall be made for storm water runoff (Waste Nos. 003, 004, 005, 006 and 007) in excess of the treatment and storage capacity.
2. Dry weather discharge from Waste Nos. 003, 004, 005, 006 and 007 is prohibited. Any exception to the prohibition for discharges from routine pumping test must be approved by the Regional Board Executive Officer.
3. Bypass or overflow of wastewater to waters of the State either at the treatment facilities or from the collection or transport system or pump stations tributary to the treatment plant or outfall is prohibited. Exception shall be made for stormwater runoff (Waste Nos. 003, 004, 005, 006 and 007) in excess of the treatment and storage capacity.
4. The average dry weather flow of Waste No. 001 shall not exceed 1.2 mgd. Average shall be determined over three consecutive dry months each year.

B. Effluent Limitations

Waste No. 001

1. The wastewater discharged into the combined outfall shall not exceed the following limits:

<u>Constituent</u>	<u>Unit</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Maximum Daily</u>	<u>Instant- aneous Maximum</u>
a. Settleable Matter	ml/l/hr	0.1	-	-	0.2
b. BOD <sub>5</sub>	mg/l	25	35	50	-
c. Total Suspended Solids	mg/l	25	35	50	-
d. Oil and Grease	mg/l	10	-	20	-
e. Total Chlorine Residual(1)	mg/l	-	-	-	0.0

- (1) Requirement defined as below the limit of detection in standard test methods. Compliance with this limitation may be demonstrated at the NBSU dechlorination facility.

2. Discharge shall not have pH of less than 6.0 nor greater than 9.0.

3. Discharge shall meet the following limits of toxicity:

The survival of test organisms in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival based on the ten most recent consecutive samples. Samples may be dechlorinated in the laboratory prior to testing to provide a chlorine residual equal to that of the waste as discharged from the NBSU dechlorination facility.

4. The arithmetic mean of the suspended solids values, by weight for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85 percent removal).
5. During the months of May through September the moving median value for the MPN of total coliform in any five (5) consecutive effluent samples shall not exceed 23 coliform organisms per 100 milliliters. Any single sample shall not exceed 240 MPN/100 ml.

During the the months of October through April, the moving median value for the MPN of total coliform in any five (5) consecutive effluent samples shall not exceed 240 MPN/100 ml. Any single sample shall not exceed 2,400 MPN/100 ml.

6. In any representative set of samples, the waste discharged shall not exceed the following limits in ug/l:<sup>(1)</sup>

<u>Constituent</u>	<u>Daily Maximum</u>
a. Arsenic	200
b. Cadmium	30
c. Chromium(VI) (2)	110
d. Copper	200
e. Lead	56
f. Mercury	1
g. Nickel	71
h. Silver	23
i. Zinc	580
j. Cyanide	25
k. Phenols	500
l. PAHs <sup>(3)</sup>	150

- (1) These limits are intended to be achieved through secondary treatment and source control.
- (2) Discharger may at its option meet this limit as total chromium.
- (3) As identified by EPA Method 610. If a discharge exceeds the limit of polynuclear aromatic hydrocarbons, concentration of individual constituents should be reported.

#### C. Receiving Water Limitation

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;

- b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
- a. Dissolved oxygen      5.0 mg/l minimum.  
Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
  - b. Dissolved sulfide      0.1 mg/l maximum.
  - c. pH      Variation from natural ambient pH by more than 0.5 pH units.
  - d. Un-ionized ammonia      0.025 mg/l as N annual median  
0.4 mg/l as N maximum
3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

#### D. Provisions

- 1. The requirements prescribed by this Order supersede the requirements prescribed by Orders Nos. 84-13, 81-18, 77-25, 75-76 and Resolutions Nos. 692 and 499. Orders Nos. 81-18, 77-25, 75-76, and Resolutions Nos. 692 and 499 are hereby rescinded.
- 2. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:

Mass Emission Limit in lbs/day = Concentration Limit in mg/l x 8.34 x Actual Flow in mgd averaged over the time interval to which the limit

applies.


3. The discharger shall implement and enforce the source control program in accordance with the Regional Board Order No. 84-60.
4. The discharger shall maintain a current Operation and Manitenance Manual. It shall be reviewed and updated routinely. The past year's revision, or a letter stating that no changes are needed shall be submitted to the Regional Board by April 15 of each year.
5. The discharger shall comply with the self-monitoring program as adopted by the Regional Board.
6. The discharger shall comply with all sections of the Order immediately upon adoption except as stipulated in Provisions D.7, D.8, D.9 and D.10 below.
7. The discharger shall comply with Prohibition A.2 by submitting an engineering report acceptable to the Regional Board Executive Officer on or before March 31, 1988. The engineering report shall include corrective action and a time schedule for stopping infiltration and eliminating dry weather discharge from Pump Stations Nos. 1 and 2.
8. The discharger shall comply with Effluent Limitation B.6.j by using Best Available Technology and source control and demonstrate full compliance on or before January 15, 1988.
9. The discharger shall comply with Provision D.4 by developing a best management plan for operation of the first flush ponds that is acceptable to the Executive Officer on or before March 31, 1988. The best management plan shall evaluate the adequacy of the capacity for each of the first flush ponds and include operational procedures for the first flush ponds.
10. The discharger shall comply with Provision D.5 by installing automatic samplers at each of the drainage pump stations which will be actuated by the operation of the pumps on or before January 15, 1988.
11. The discharger is required to provide to the Board by January 15, 1988 and quarterly thereafter, a detailed report, under penalty of perjury, on progress toward compliance with the Provisions D.7, D.8, D.9 and D.10 of this Order.
12. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
13. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986.
14. All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to Environmental Protection



Agency regulations 40 CFR 122.41k.

15. Pursuant to Environmental Protection Agency regulations [40 CFR 122.42(a)] the discharger must notify the Regional Board as soon as it knows or has reason to believe that (1) it has begun or expects to begin, use or manufacture of a pollutant not reported in the permit application, or (2) a discharge of a toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that exceed the notification levels specified in 40 CFR 122.42(a).
16. This Order expires on September 16, 1992. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
17. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on September 16, 1987.

  
ROGER B. JAMES  
Executive Officer

Attachments:

Standard Provisions & Reporting  
Requirements, December 1986  
Self-Monitoring Program  
Resolution 74-10  
Discharge Location Map



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM  
FOR

CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT  
INDUSTRIAL WASTE TREATMENT PLANT  
NORTH BAYSIDE SYSTEM UNIT  
SAN MATEO COUNTY

NPDES NO. CA0028070

ORDER NO. 87-127

CONSIST OF

PART A

AND

PART B

## PART B

### I. DESCRIPTION OF SAMPLING STATIONS

#### A. INFLUENT AND INTAKE

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present, preceding any phase of treatment, and exclusive of any return flows or process sidestreams.

#### B. EFFLUENT

Station	Description
E-001	At any point in the plant after disinfection between the point of discharge into the combined outfall and the point at which all waste from the treatment plant is present.
E-002	At any point in the combined outfall after dechlorination between the point of discharge into San Francisco Bay and the point at which all waste tributary to that combined outfall is present.
E-003	At the point of discharge from the southern sump (pump station no. 1).
E-004	At the point of discharge from the northern sump (pump station no. 2).
E-005	At the point of discharge from the pump station no. 1A.
E-006	At the point of discharge from the pump station no. 1B.
E-007	At the point of discharge from the pump station no. 1C.

#### C. RECEIVING WATERS

Station	Description
C-1	At a point in San Francisco Bay located over the geometric center of the outfall's discharge ports.
C-2	At a point in San Francisco Bay located midway between C-1 and C-3.
C-3	At a point in San Francisco Bay located in the center of the waste plume.

C-50-SW	At a point in San Francisco Bay, located 50 feet southwesterly, along the outfall line shoreward from Station C-1.
C-50-NW	At a point in San Francisco Bay, located 50 feet northwesterly from Station C-1, normal to the outfall line.
C-50-NE	At a point in San Francisco Bay located 50 feet northeasterly from Station C-1, along the outfall line extended.
C-50-SE	At a point in San Francisco Bay located 50 feet southeasterly from Station C-1 normal to the outfall.
C-300-N through C-300-NW (8 stations)	At a point in San Francisco Bay located on a 300 foot radius from the geometric center of the outfall diffuser, at equidistant intervals, with Station C-300-SW located shoreward from Station C-1 at the outfall line.
C-R-NW	At a point in San Francisco Bay located approximately 1500 feet northerly from the point of discharge.
C-R-SE	At a point in San Francisco Bay, located approximately 1500 feet southeasterly from the point of discharge.

#### D. LAND OBSERVATION

Station	Description
P-1 through P-'n'	Located along the periphery of the waste treatment or disposal facilities, at equidistant intervals, not to exceed 100 feet. ( A sketch showing the locations of these stations shall accompany each report.)

#### E. OVERFLOWS AND BYPASSES

Station	Description
OV-1 through OV-'n'	Bypass or overflows from manholes, pump stations, or collection system. ( Initial SMP report to include map and description of each known bypass or overflow location, and report on pump station alarms, pumping capacity, upstream storage capacity and bypass location.)

Reporting: Shall be submitted monthly and include date, location, cause and volume of each overflow or bypass and measures taken or planned to prevent future occurrences.

## II. REPORTING REQUIREMENTS

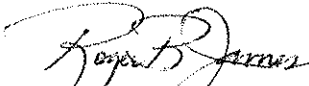
- A. The self-monitoring report shall be submitted monthly to include data requested under I.A, I.B, I.C, I.D and I.E. Data collected at the joint facilities can be omitted from the monthly self-monitoring report if it is reported to the Board by the lead agency responsible for the operation of the joint facilities.
- B. The source control report shall be submitted quarterly and include the tenants that were in violation of the Tenants Improvement Guide Section 504.8 during that quarter and followup actions taken by the discharger.

## III. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing self-monitoring program:

- 1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order NO. 87-127.
- 2. Is effective on the date shown below.
- 3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

  
ROGER B. JAMES  
Executive Officer

Effective Date: SEPTEMBER 21, 1987

Attachments:

Table I and Legend for Table

Order No. \_\_\_\_\_

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS <sup>1)</sup>

Sampling Station	A-001		E-001			E-002			E-003 E-007	All Sta.	All Sta.
TYPE OF SAMPLE	Cont	C-24	G <sup>4)</sup>	C-24	Cont	G	C-24	Cont	G <sup>13)</sup>		G
Flow Rate (mgd)	cont							cont	D <sup>12)</sup>		
BOD, 5-day, 20° C and COD (mg/l & kg/day)		2/W		2/W			5/W		M		
Chlorine Residual & Dosage (mg/l & kg/day)			2H or cont <sup>8)</sup>			2H or cont <sup>8)</sup>					
Settleable Matter (ml/1-hr. & cu. ft./day)			D			D			M		
Total Suspended Matter (mg/l & kg/day)		2/W		5/W			5/W		M		
Oil & Grease (mg/l & kg/day)		2) M	M			2) 2M			M		
Coliform (Total or Fecal) (MPN/100 ml) per req't			3/W			5/W					3) M
Fish Toxicity, 96-hr. TL <sub>50</sub> or % Survival in undiluted waste				6) M			5) M		M		
Ammonia Nitrogen (mg/l & kg/day)				9) M			9) M				
Nitrate Nitrogen (mg/l & kg/day)							9) M				
Nitrite Nitrogen (mg/l & kg/day)							9) M				
Total Organic Nitrogen (mg/l & kg/day)											
Total Phosphate (mg/l & kg/day)											
Turbidity (NTU)				D			M				M
pH (units)	cont		D			D			M		M
Dissolved Oxygen (mg/l and % Saturation)			D			D					M
Temperature (°C)			D			D					M
Apparent Color (color units)											
Secchi Disc (inches)											M
Sulfides (If DO < 5.0 mg/l) Total & Dissolved (mg/l)						D					M
Arsenic (mg/l & kg/day)				7) M					M		
Cadmium (mg/l & kg/day)				7) M					M		
Chromium, Total (mg/l & kg/day)				7) M					M		
Copper (mg/l & kg/day)				7) M					M		
Cyanide (mg/l & kg/day)				7) M					M		
Silver (mg/l & kg/day)				7) M					M		
Lead (mg/l & kg/day)				7) M					M		

**TABLE I (continued)**  
**SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS**

Sampling Station	A-001		E-001			E-002		All OV Sta.	E-003 thru E-007 (14)	All P Sta.	All C <sup>(10)</sup> Sta.	
TYPE OF SAMPLE	C-24		G	C-24	Cont	G	C-24		G		O	G
Mercury (mg/l & kg/day)				7) M					M			
Nickel (mg/l & kg/day)				7) M					M			
Zinc (mg/l & kg/day)				7) M					M			
PHENOLIC COMPOUNDS (mg/l & kg/day)				7) M					M			
All Applicable Standard Observations				D		D		E	12) M		M	M
Bottom Sediment Analyses and Observations												
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)				7) Q								
Non-dissociated Ammonium hydrocarbon as N (mg/l)												M
Total Organic Carbon									M			
Dewatered Sludge											11) D	
Daily Rainfall											D	
PAHs				M								

**LEGEND FOR TABLE**

**TYPES OF SAMPLES**

G = grab sample  
C-24 = composite sample - 24-hour  
Cont = continuous sampling  
O = observation

**TYPES OF STATIONS**

A = treatment facility influent stations  
E = waste effluent stations  
C = receiving water stations  
P = treatment facilities perimeter stations  
L = basin and/or pond levee stations  
OV = Overflows and Bypasses

**FREQUENCY OF SAMPLING**

E = each occurrence  
H = once each hour  
D = once each day  
W = once each week  
M = once each month  
Y = once each year

2/H = twice per hour  
2/W = 2 days per week  
5/W = 5 days per week  
2/M = 2 days per month  
2/Y = once in March and  
once in September  
Q = quarterly, once in  
March, June, Sept.  
and December

2H = every 2 hours  
2D = every 2 days  
2W = every 2 weeks  
3M = every 3 months  
Cont = continuous



1/ During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analyses:

- a. Composite sample on a hourly basis for BOD and Total Suspended Solids during bypassing.
- b. Grab samples on a daily basis for Total Coliform, Settleable Matter and Oil and Grease.
- c. Continuous monitoring of flow.
- d. Continuous or every two hour monitoring of chlorine residual.

2/ Oil and Grease sampling shall consist of 3 grab samples taken at 8-hour intervals during the sampling day with each grab being collected in a glass container and analyzed separately. Results for stations A-001 and E-001 shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates occurring at the time of each grab sample. Results for station E-002 shall be expressed as a simple average of the three values. If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the three grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that discharge is made.

The 3 grab samples may be combined and analyzed as a composite sample after submittal of data acceptable to the Executive Officer that the two techniques are equivalent. In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit, 30-day average limitation (considering the results of one or two day's sampling as a 30-day average), then the sampling frequency shall be increased to weekly so that a true 30-day average can be computed and compliance can be determined.

3/ 5 samples per station each day at Stations C-1, 2, 3, CR-NW and CR-SE ONLY.

4/ Grab samples shall be taken on day(s) of composite sampling.

5/ Sample date for bioassay and for one of all other specified parameters at E-002 shall coincide with date and times of Calgon Corp. E-001 composite sample.

6/ If a continuous bioassay is to be run, sample may be taken from E-001 prior to disinfection instead of dechlorinating E-001 effluent.

7/ If any sample is in violation of limits, sampling shall be increased for that parameter to weekly until compliance is demonstrated in two successive samples.

- 8/ Data shall be reported using Form A (attached) or equivalent, chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.
- 9/ These parameters shall be tested for on the same composite sample used for the bioassay.
- 10/ Monthly sampling dates and approximate times shall coincide with receiving water monitoring conducted by the City of South San Francisco and the North Bayside System Unit.
- 11/ Daily records shall be kept of the quantity and solids content of dewatered sludge disposed of and the location of disposal.
- 12/ To be recorded daily during wet weather months (October-April) and weekly during dry weather from pump run times (hour meters). Visual observations of the appearance of any liquid in the sumps shall be made and recorded at the times the hour meters are checked. Sumps to be inspected for and cleaned of any organic settled solids in September of each year.
- 13/ Samples shall be taken using an automatic sampler capable of collecting discrete, consecutive samples in glass bottles. Samplers shall commence sampling when the lead discharge pump commences pumping. Proposed frequency and duration of sampler operation shall be submitted to and approved by the Executive Officer. The number of discrete samples to be taken and analyzed shall also be so approved.
- 14/ Monthly sampling during wet weather months (October-April) for E-005, E-006 and E-007.